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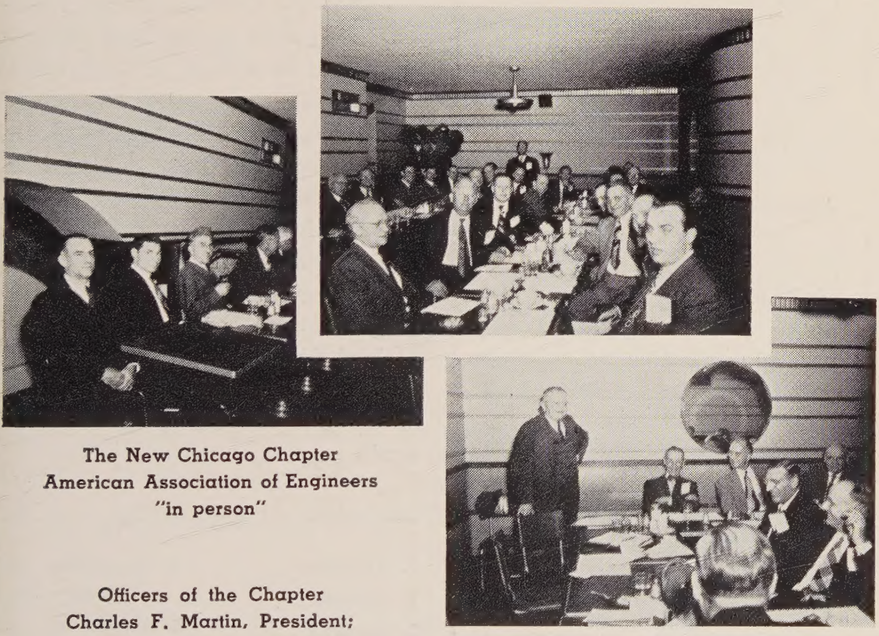

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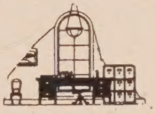

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Engineers . . .

Engineers ! — Measure up to your Civic Responsibilities

12. Urge the importance of comprehensive planning, in order that needs of the community may be anticipated and relative importance of public improvements clearly understood.

11. Insist upon creation of boards to plan programs of public improvements.

10. See that registration laws are enforced and that all technological positions are filled by professional engineers.

9. Demand civil service protection of engineering judgment and integrity.

8. Organize in local and state societies, available for counsel on technological matters considered by other civic agencies.

7. Affiliate with Chamber of Commerce in order to cooperate in initiating programs and supporting those sponsored by civic agencies.

6. Open engineering society meetings to the public when community problems are discussed.

5. Help make every dollar of taxpayer's money count for civic efficiency.

4. Be individually alert in observing smaller needs of your community.

3. Remember that every educated citizen bears a responsibility in a democracy to guide public opinion.

2. Establish close relations with service clubs and with the press.

1. Cultivate the art of describing technological projects and their social and civic significance in terms understandable by the laity.

YOU *Are Important*

*"No matter who you are, or what you are, or where you may be, you can do something to change the world for the better. You, as an individual, are important. You count!" says Father James Keller in his book "YOU CAN CHANGE THE WORLD."**

By M. E. McIVER, Editor

This is the essence of Father Keller's philosophy—and the credo of the "Christopher" movement which he initiated.

In a condensation of his book, the "Readers' Digest" (April, 1949) says that a Christopher is "one who believes in individual responsibility for the common good of all and sets himself a specific job to do; an average man or woman ready to work and make personal sacrifices." The movement, the Digest explains, embraces all faiths. It has no chapters, no committees, no meetings; there are no membership lists and no dues. Its central office mails out occasional bulletins to some 100,000 interested persons and is the only unifying contact between members. The outstanding characteristic of the movement, says the Digest is each "Christopher's" belief that "alone and unaided he has a post of his own in the war between good and evil . . ." and that he has the power, *as an individual,* to change the world.

There are still in these United States, praise God, many people who share Father Keller's stout belief in the worth of the individual and in the individual's personal responsibility for the common good of all, quaint as such belief may be to those who put their faith in "mobocracy" instead of in democracy; who chant exclusively of "rights" and never of obligations and responsibilities. Quaint as the Bible, as the Magna Charta, as the Declaration of Independence, and as the Constitution of the United States. Quaint as our American belief that the security of the State depends ultimately upon the self-reliance of its citizens is to those who naively trust that the security of individual citizens can be achieved through support derived from the State.

Quaint also as the notion that engineering is a real profession and that membership in a profession not only confers rights but imposes obligations, both social and fraternal. By these standards American Association of Engineers is as quaint as the Christophers—founded upon the notion that engineering *is* a profession, that it is also *one* profession, not a collection of specialties nor a hierarchy in which some inescapable conflict of interests must forever pit employee-engineers against employer-engineers. American Association of Engineers is founded very firmly on the belief that every engineer is a debtor to his profession and to society. It is a fraternal organization in which every member, as an individual, acknowledges his responsibility for the common good of all and finds an opportunity to undertake a specific job to advance the common good. Underwriting A.A.E.'s program in membership dues every member, to that degree, accepts his individual responsibility for the common good of all—but the good that can be done by all these individuals cooperating in American Association of Engineers is illimitable if each member will set himself a specific job to do.

**You Can Change the World,* copyright 1948 by The Christophers, Inc., published by Longmans, Green & Co., 55 Fifth Ave., New York 3, N.Y. ($3.00)

If each member will overcome a sense of personal futility and know that he can "alone and unaided" find his "post in the war between good and evil" A.A.E. members can, indeed "change the world" of engineering. Hundreds of Christophers have proved that thesis.

Fulton Oursler, in the May, 1949, issue of "Reader's Digest" has told how a Connecticut housewife, inspired by the Christopher creed that ordinary people can, by selfless acts, bring about extraordinary changes in the world, sparked the movement which resulted in the escape of Madame Oksana Stepanovna Kasenkina from her Russian jailers and exposed the arrogant contempt of Russia for civil rights of individuals. As Mr. Oursler tells the story, Madame Kasenkina had been kidnapped from the home of anti-Communist, Countess Alexandra Tolstoy and was held a prisoner in the house of Jacob M. Lomakin, Russian Soviet Consul General in New York until she could be returned to Russia, undoubtedly to be liquidated. A Connecticut housewife, Louise McKeon, says Mr. Oursler, like several million other Americans, read the story and burned with indignation at the thought that Russians in our country could flout our laws by invading a private home and kidnapping anyone, even another Russian citizen. Unlike several million other Americans, however, Mrs. McKeon believed that we should not passively accept the situation; she believed that as an individual she had "a post of her own in the war between good and evil" which compelled her to act.

To her husband's quite normal query of "What can *you* possibly do about it?" she answered, says Mr. Oursler, in Father Keller's words:

"I don't care if you are buried in Alaska, drop that feeling of personal futility and just try something some time. When you do, you will not be alone; the Good Lord will be right there helping you!"

Louise McKeon turned to her brother, Peter Hoguet, an attorney, for help in her enterprise. His first reaction was also the common one of "It's too bad, but it's not your business." "Then whose business is it?", he asked himself. Peter Hoguet was moved out of his feeling of personal futility and inspired to try something. He won the cooperation of a group, Common Cause, Inc., to strengthen his campaign. He was able to secure a writ of habeas corpus and serve it upon Jacob Lomakin. Crowds gathered outside Lomakin's home; the radio carried the story. It was this proof that *an individual still means something in America,* says Oursler, which inspired Madame Kasenkina to make her desperate leap from the window of the

Consulate to liberty. Individuals who accepted responsibility for the common good and were willing to do something specific about it, succeeded where our State Department had been helpless, and when the protective force of American justice was frozen. Ordinary people refused to hide behind the excuse of personal futility and proved that individuals can change the world for the good of all. The faith is not strange to members of American Association of Engineers.

Back in 1915 the little group of men who founded American Association of Engineers to "change the world" of engineering, and correct inequities and follies which bedeviled tyro and top-ranking engineers alike, might well have shrugged off the individual's responsibility for the common good of all with the familiar phrases "It's too bad, but it's not our business" or "What can *we* possibly do?" They might have argued that the job was so formidable that the powerful technical societies declared it impossible. They might have believed that only the most eminent engineers could hope to gain attention and initiate a movement to change the world of engineering. Instead, they conquered that feeling of "personal futility"; they accepted individual responsibility for the common good of all; they set themselves specific jobs to do.

Every man was a crusader, fired with zeal for the good of his profession and all its members. No job was too menial, no demand upon their time too great. At headquarters, the members themselves mimeographed bulletins, addressed and stuffed envelopes, until the association could afford clerical help. The "Degree Teams" covered Metropolitan Chicago, winning converts, not perfunctory memberships, crossed country and eventually state lines to preach the doctrine "Cooperate—Advance." The whirlwind growth of the organization and the zeal of its members startled the world of engineering.

Always there has been a firm core of active members willing to work for A.A.E. and its aims, but with membership growth it became possible for most members to satisfy a sense of "individual responsibility" for the common good of all by merely paying dues—underwriting the movement. As the membership grew, a smaller and smaller proportion of members felt the need of setting themselves specific jobs to do for the good of the A.A.E. movement. Paid employees, with ambitious but impersonal membership campaigns largely replaced the apostles who had converted, rather than recruited, engineers into membership in the early days, imbuing them with a full understanding of the basic aims of A.A.E.—"To promote the social and economic welfare of the Engineer, to stimulate public service in the profession, to encourage and develop the efficiency of the Engineer and to promote unity in the profession."

Throughout the years American Association of Engineers has had the loyal support of engineers who know that the A.A.E. ideal is sound—and that realization of its aims is essential to the welfare of the profession. They testify by their membership in A.A.E. to their belief that engineering is one profession and that it can remain a profession only if the individuals who compose it recognize the individual's responsibility for the common good of all. There are not enough members, however, who are also ready to set themselves, as did A.A.E.'s first members, a specific job to do. Too many surrender because of youth and inexperience of age and infirmity, because of difficulties peculiar to the beginning grades of practice or demands upon the time and energy of the most successful established engineers, to that "sense of personal futility" and fail to recognize the truth so well phrased by Father Kelly of the Christophers:

"No matter who you are, or what you are, or where you may be, you can do something to change the world for the better. You as an individual, are important. YOU COUNT!"

Ed.

NEW HAVEN YMCA JUNIOR COLLEGE CHAPTER A.A.E.

Among the "distinguished" guests—and hosts—at the closing dinner meeting of the session 1848-49, the culmination of the New Haven (Conn.) YMCA Junior College Engineering Society's first year as a student chapter of the American Association of Engineers, were Raymond E. Bellmore, Chairman for the year; Lincoln V. Thompson, President of the Sound Scriber Corporation of New Haven, guest speaker; Dr. Lawrence L. Bethel, Director of the College; Dr. Walter R. Hibbard, Jr., Chapter Faculty Adviser; and James Boyle, Jr., Chairman for the session 1947-48 under whose leadership the Society was chartered as a student chapter of the A.A.E.

Newly-elected officers of the New Haven (Conn.) YMCA Junior College Student Chapter of the American Association of Engineers are (left to right—seated) James E. Lyons, Vice-Chairman; Leon P. Taylor, Chairman; Basil S. Nickerson, Recording Secretary; (standing) Thad M. Hasbrouck, Corresponding Secretary; John Kerpchar, Treasurer; William R. Ajello, Program Committee Chairman, and John S. Hegedus, Membership Committee Chairman. Each is a charter member of the year-old student chapter.

New Haven YMCA Junior College Chapter

Outstanding speakers, field trips in industrial southern Connecticut, and three chapter projects characterized the first year of activities of the New Haven YMCA Junior College's "Engineering Society" as a student chapter of the American Association of Engineers. Under the Chairmanship of Raymond E. Bellmore, Engineering Alumnus of the Class of 1947 and head of the Research Department of the United Elastic Corporation, the group has grown from a membership of 96, when it was made an official A.A.E. Chapter in June, 1948, to 134 student and alumni members.

Guest speakers who addressed the group at regular sessions and at special dinner meetings throughout the year were Dr. Ernest C. Pollard, Associate Professor of Physics at Yale University, who spoke on "Atomic Energy"; William B. Sletzner of the Application Engineering Division of the General Electric River Works, West Lynn, Massachusetts, on "Jet Propulsion in Aircraft"; Lincoln V. Thompson, President of the Sound Scriber Corporation, New Haven, whose topic was "Sound Recording"; and Dr. Lawrence L. Bethel, Director of the New Haven YMCA Junior College, who spoke on "The Engineering Society Looks at the Community College Graduate."

Under the guidance of Company Officials, Chapter Members and their guests toured the New Haven Plant of the American Steel and Wire Company, the Raybestos Division of Raybestos Manhattan, Inc., of Bridgeport; the Armstrong Rubber Company in West Haven; the Sidney Blumenthal Company of Shelton, and the New Haven Pulp and Board Company, all Connecticut plants.

The A.A.E. projects included the establishment of an annual "Scroll Award" to the outstanding engineering student in each graduating class "in recognition of scholastic attainment, general ability, and promise in the field of engineering." Bellmore made the first presentation in duplicate to graduates selected by a student-faculty Award Committee. Recipients at the College's 29th Annual Commencement Exercises in June were Frank A. S. Elliott, of the Sound Scriber Corporation; and John M. Lewis, Jr., of the Southern New England Telephone Company. In addition, chapter members assisted Dr. Walter R. Hibbard, Jr., Chairman of the College's Engineering Division and Faculty Adviser to the A.A.E. Chapter, in a survey of divisional graduates to evaluate the engineering program, and to plan the establishment of new degree programs within the engineering division.

Six members of the student chapter will apply for senior membership in the American Association of Engineers. They are Howard R. Chandler, of the A. C. Gilbert Company, and Frank J. Griesing of the J. B. Engineering Sales Company, both of New Haven; Harold S. Jennings, of the Farrel-Birmingham Company, Ansonia; John Kerpchar, Instructor at the Bullard-Havens Technical School, Bridgeport; Frederick F. Shrier, of the O.K. Tool Company, Shelton; and Arthur L. Stahl, of Stahl's Hudson Company, Derby.

The year's activities culminated in the election of officers for the 1949-50, which begins this month (September). The new executive committee is headed by Leon P. Taylor, of the American Steel and Wire Company, who has been elected Chairman. Others are James E. Lyons, of the Winchester Repeating Arms Company, Vice-Chairman; Thad M. Hasbrouck, Corresponding Secretary, and Basil S. Nickerson, Recording Secretary, both of the Safety Car Heating and Lighting Company; John Kerpchar, Treasurer; William R. Ajello, of P. J. Ajello, Inc., Chairman of the Program Committee; and John S. Hegedus, of the Electrolux Corporation, Membership Committee Chairman. Each of the new officers is a charter member of the chapter, which was first organized as a College divisional activity in 1947.

Plans for a membership drive are now under way.

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AN ENGINEER'S *Civic Responsibilities*

By ROSS V. OTT, Student Engineer

This article was written by a student in Engineering English, at the Missouri School of Mines and Metallurgy, Rolla, for "Professional Engineer," sent to us by James J. Jelinek, Associate Professor, who uses "Professional Engineer" in his class work because he believes it an excellent aid in stimulating students to a consideration of the important problems which prevail in their profession.

IN THE world of today every forward looking citizen must use all of his influence in striving to help solve the numerous and urgent problems that beset modern man in his complex society. The engineer has the same moral obligation to do his share as any other citizen and should not claim exemption because his work may be unusually difficult and arduous. Together with other professional men he should take a place of leadership in civic affairs.

By virtue of his specialized training he is peculiarly fitted to make a definite contribution toward civic betterment. It is readily apparent to almost anyone that an engineer's technical "know-how" is a valuable asset in many a local emergency, but maybe not so evident is the fact that his training has placed emphasis upon such qualities as honesty and co-operation which could carry over into civic affairs: He has learned how to approach a problem and work it out to its logical conclusion. Scientific training with its zealous search for truth should certainly help to create an attitude of mind unfavorable to the growth or development of prejudice and bigotry. In this modern age with all its accompanying forms of social injustice there is a real need for just such qualities. A mind trained in logical thought-processes is not nearly so likely to be led astray by reactions of a purely emotional nature. Personal bias or self interest should be kept at a minimum in dealing with problems that affect the welfare of many people. If the engineer can bring to these civic and social affairs the impassionate consideration he has learned to apply to his own technical subjects, he will have made an invaluable contribution. Henry T. Heald, President Illinois Institute of Technology, sums it up thus:

"All engineers can and should participate in community groups, serve churches, schools, hospitals and libraries, and take part in community drives, programs, and other affairs . . . You can accomplish a great deal more through your associations with other citizens. This country's engineers can exert a tremendous influence for civic good if they mobilize for the task."[1] The application of the engineering method to civic affairs would be tremendously helpful. The engineer's method of substituting facts for opinions and subjecting theories to rigid tests before decisions are made would make a large contributtion in the working out of civic problems. Thus the engineer might serve as a kind of balance wheel.

A great deal of work in popular education needs to be done. For instance, the public is not sufficiently aware of the urgent necessity for initiating long range conservation programs. Engineers should help awaken the citizenry to the alarming depletion of most of our natural resources—soil, water, plants, and animals—and be responsible for suggesting practical ways of meeting these problems.

A. G. Mezerik in *The Nation* paints a vivid picture of the tragic results of soil erosion. "The soil, rocks, and vegetation washed out of the uplands is carried by small streams into the great rivers, where the tragic effects can be seen by any traveler. Not long ago the Rio Grande near Albuquerque had high banks and a deep channel and flowed usefully through its pleasant irrigated valley in high New Mexico. But the millions of tons of earth and sand carried down from the mountains have so filled the channel that even a small flood menaces the entire valley and Albuquerque is in the future and endless business of building dikes. The dikes have already destroyed the Rio Grande's usefulness as drainage for the valley. Thousands of acres have become waterlogged; alkali has come to the surface. Land irrigated for three hundred years by the Spaniards and the Indians is now being abandoned. And the story does not end here. Much of the sediment is carried on to the very mouth of the river. Floods, loss of fertility, and water-hunger go with it. All the West's great river basins face the same danger."[2]

Many local problems come within the province of an engineer's training. For example, disposing of a city's waste materials—smoke, sewage, garbage, metal and glass, storm water—presents problems only the technically trained are capable of meeting.

The part the technically trained can play is well illustrated by an incident that took place in St. Louis on November 13, 1939, when the chief editorial writer of the *Post-Dispatch*, Ralph Coghlan, was driving to work. He suddenly found his car on the sidewalk and the terrified face of a Western Union boy loomed up over his radiator as car crashed into bike. The boy was only shaken up but Goghlan was so alarmed over the near catastrophe caused by poor visibility created by the thick smoke that he wrote an angry editorial attacking air pollution. This in turn aroused the mayor to appoint a citizen's committee to work with the smoke commissioner. A solution was quickly reached and college trained smoke inspectors went around teaching the principles of combustion engineering to those who continued to violate the new smoke ordinance.

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[1] Henry T. Heald, "The Engineer in Civic Affairs," Midwest Engineer, Vol. 1, No. 1, September, 1948, p. 20.

[2] A. G. Mezerik, "Wasteland in the Making," The Nation, Vol. 168, No. 14, April 2, 1949, pp. 389-390.

To point up the seriousness of conditions in some localities one need only recall the incident last October at Donora, Pa., when within 48 hours a blanket of smoky fog killed 20 persons, sent 40 others to hospitals, and left 400 more with respiratory ailments.

Active participation in the working out of such problems would help to earn for the engineer his rightful place among other professional men. Desire on the part of engineers for greater public prestige must be backed up by earnest individual effort. But individual effort is not enough—it will require concerted action of engineers as a group to bring about any change.

The failure of the public generally to properly recognize an engineer's capacities and functions instead of causing disgruntlement might instead serve to awaken engineers to their own responsibility. Men who have the intelligence to conceive and carry out great feats of engineering skill must not be timid when the time comes for action in civic matters. A desire for efficiency in government and more advantageous legislation must be translated into action. Attainment of full professional status will be the reward for assuming proportionate responsibilities in civic affairs.

A.A.E. Was Represented

—at the National Conference on the United Nations held in the New State Department Building, Wash., D.C. on January 14th by George W. Thompson of Falls Church, Va.

—at the M.I.T. Inauguration on April 2, by Walter R. Hibbard, Jr., Hammond Metallurgical Laboratory, Yale University, New Haven.

—at the National conference on Social and Economic Problems in the United Nations held in the Department of State, Wash. D.C., on June 2 and 3, by Henry W. Austin.

—at the National Conference on UNESCO held at Cleveland, Ohio, March 31 to April 2, by C. T. Parker, of that city.

—39th convention of the National Rivers and Harbors Congress, held in Washington, D.C. on April 8 and 9, by Fred W. Gast of Maryland.

28th Annual Meeting, NCSBEE

The 28th annual meeting of National Council State Boards of Engineering Examiners will be held in the Sheraton Plaza Hotel, Daytona Beach, Florida on November 10, 11th and 12th. A.A.E.'s official representative will be W. Austin Smith, Jacksonville, Florida.

Chaffey College, A.A.E. Chapter

Let's let Arthur E. Flum, Advisor, speak for A.A.E.'s student members at Chaffey College, California. He does a good job and we are delighted that he is so vitally interested in the human side of engineering. Here's his letter, received during the summer:

"We're simply overwhelmed! The magazines arrived just at the end of final examination week, and the fellows were already feeling a bit light-headed from having gone through the wringer on the exams. Then, when they saw the picture, they just about floated through the ceiling! We hardly know how to say 'Thanks' but we intend to be just about the hardest working club in existence next year.

"Our last meeting of the year was our annual Father-Son Banquet the other evening, always a fine success. We installed next year's officers: Pres., Francis Watkins; Vice-Pres., Dick Batchelor; Secretary, Bruce Boshart; and Treasurer, Hugh Stevens. All of them are G.I.'s.

"The principal speaker on the program was a national figure in the field of science, Dr. Max Mason. We felt very honored to have him, since he is at the present time the chief administrator of the Cal Tech 200-inch telescope, and has in the past been president of the Rockefeller Foundation, President of the University of Chicago, and held other important posts too numerous to mention. He spoke to us about his work in underwater sound detection during both world wars—extremely interesting and very humorous.

"I know you'll be interested in the fact that he believes college clubs are very important, and thinks the work you're doing to sponsor such activities is very commendable."

And here's his September letter:

"It was a pleasure to hear from you again and to know that you found our annual interesting to look through. Here we are—beginning another year with the usual anticipation, enthusiasm, and all the initial rush of things! In fact, this is but the third day of school and the officers of the Engineers Club is having a meeting this noon to plan the year's activities, start the membership drive, and get going.

"We are expecting to have a total membership of approximately thirty-five members. Would it be possible for you to send us that many membership card blanks by return mail so that when we have our initiation dinner about two weeks hence we will be able to present the fellows with their membership cards. I'll then send you a list of their names. We would also like to order 22 club pins so that we can present them as soon as possible.

"We seem to have a good deal of enthusiasm this year, so I believe this will be a fine year for the Engineers Club. I'll keep you informed."

Arizona State College

According to a letter received at Headquarters from Everett H. Cook, secretary of the Arizona State College Student Chapter, A.A.E., the engineers are all ready for a banner year. They expect a large chapter membership and plenty of activity. The new officers for the year are: President, Bob McCartan, vice president, Eugene Sckaquaptewa; Secretary, Everett H. Cook; Treasurer, Kenneth A. Case, and social chairman, Stanley Patterson.

A New Treatment of International Scope on

HEAT TRANSFER

Volume I

By MAX JAKOB

Research Professor of Mechanical Engineering, Illinois Institute of Technology

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Book Reviews

Constructive Uses of Atomic Energy, edited by S. C. Rothmann, Harper Bros. & Co. $3.00.

This book is written for the layman and contains discussions by fourteen outstanding scientists such as Arthur Compton and others. A useful book for engineers and executives seeking information on the potential possibilities of atomic energy in a peacetime economy. An outstanding book.

Analytical Mechanics of Gears, by Earle Buckinham, Professor of Mechanical Engineering, Massachusetts Institute of Technology. 1st Ed. McGraw-Hill Book Co. $10.00.

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